Andreas Kolb

List of Publications by Year
in descending order

109 papers	2,898 citations	279487 23 h-index	214527 47 g-index
115 all docs	115 docs citations	115 times ranked	2587 citing authors

#	Article	IF	Citations
1	Kinect range sensing: Structured-light versus Time-of-Flight Kinect. Computer Vision and Image Understanding, 2015, 139, 1-20.	3.0	300
2	Timeâ€ofâ€Flight Cameras in Computer Graphics. Computer Graphics Forum, 2010, 29, 141-159.	1.8	250
3	Real-Time 3D Reconstruction in Dynamic Scenes Using Point-Based Fusion. , 2013, , .		246
4	Optical techniques for 3D surface reconstruction in computer-assisted laparoscopic surgery. Medical Image Analysis, 2013, 17, 974-996.	7.0	217
5	State of the Art on 3D Reconstruction with RGBâ€Ð Cameras. Computer Graphics Forum, 2018, 37, 625-652.	1.8	191
6	Time-of-Flight sensor calibration for accurate range sensing. Computer Vision and Image Understanding, 2010, 114, 1318-1328.	3.0	188
7	High-quality computational imaging through simple lenses. ACM Transactions on Graphics, 2013, 32, 1-14.	4.9	117
8	Imaging in scattering media using correlation image sensors and sparse convolutional coding. Optics Express, 2014, 22, 26338.	1.7	89
9	Hardware-based simulation and collision detection for large particle systems. Graphics Hardware, 2004, , .	0.0	74
10	Reliable face anti-spoofing using multispectral SWIR imaging. , 2016, , .		62
11	Calibration of the intensity-related distance error of the PMD TOF-camera. Proceedings of SPIE, 2007, , .	0.8	59
12	Data-Fusion of PMD-Based Distance-Information and High-Resolution RGB-Images. , 2007, , .		58
13	Opacity Peeling for Direct Volume Rendering. Computer Graphics Forum, 2006, 25, 597-606.	1.8	54
14	Robust Detection and Segmentation for Diagnosis of Vertebral Diseases Using Routine MR Images. Computer Graphics Forum, 2014, 33, 190-204.	1.8	54
15	ToF-sensors: New dimensions for realism and interactivity. , 2008, , .		41
16	Real-time simulation of time-of-flight sensors. Simulation Modelling Practice and Theory, 2009, 17, 967-978.	2.2	38
17	Temporal Blending for Adaptive SPH. Computer Graphics Forum, 2012, 31, 2436-2449.	1.8	38
18	Compensation of Motion Artifacts for Time-of-Flight Cameras. Lecture Notes in Computer Science, 2009, , 16-27.	1.0	37

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19	Technical Foundation and Calibration Methods for Time-of-Flight Cameras. Lecture Notes in Computer Science, 2013, , 3-24.	1.0	37
20	Infinite continuous adaptivity for incompressible SPH. ACM Transactions on Graphics, 2017, 36, 1-10.	4.9	35
21	Design of an Active Multispectral SWIR Camera System for Skin Detection and Face Verification. Journal of Sensors, 2016, 2016, 1-16.	0.6	34
22	Sub-pixel data fusion and edge-enhanced distance refinement for 2D/3D images. International Journal of Intelligent Systems Technologies and Applications, 2008, 5, 344.	0.2	33
23	Comprehensive Use of Curvature for Robust and Accurate Online Surface Reconstruction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2017, 39, 2349-2365.	9.7	29
24	Scientific computation for simulations on programmable graphics hardware. Simulation Modelling Practice and Theory, 2005, 13, 667-680.	2.2	28
25	Computational Image Enhancement for Frequency Modulated Continuous Wave (FMCW) THz Image. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 775-800.	1.2	28
26	Homomorphic factorization of BRDF-based lighting computation. ACM Transactions on Graphics, 2002, , .	4.9	25
27	Cooperative bin-picking with Time-of-Flight camera and impedance controlled DLR lightweight robot III. , 2010, , .		25
28	Pulse Based Time-of-Flight Range Sensing. Sensors, 2018, 18, 1679.	2.1	25
29	Quantified, Interactive Simulation of AMCW ToF Camera Including Multipath Effects. Sensors, 2018, 18, 13.	2.1	23
30	Bistatic Exploration using Spaceborne and Airborne SAR Sensors: A Close Collaboration Between FGAN, ZESS, and FOMAAS. , 2006, , .		17
31	New insights into the calibration of ToF-sensors. , 2008, , .		14
32	A Simulation Framework for Time-Of-Flight Sensors. , 2007, , .		13
33	Supporting Structure from Motion with a 3D-Range-Camera. , 2007, , 233-242.		13
34	Real-Time Motion Artifact Compensation for PMD-ToF Images. Lecture Notes in Computer Science, 2013, , 273-288.	1.0	13
35	Homomorphic factorization of BRDF-based lighting computation. ACM Transactions on Graphics, 2002, 21, 509-516.	4.9	11
36	Interactive Dynamic Range Reduction for SAR Images. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 507-511.	1.4	11

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37	Segmentation of pituitary adenoma: A graph-based method vs. a balloon inflation method. Computer Methods and Programs in Biomedicine, 2013, 110, 268-278.	2.6	11
38	Optimized Refinement for Spatially Adaptive SPH. ACM Transactions on Graphics, 2021, 40, 1-15.	4.9	11
39	Time-of-Flight camera based 3D point cloud reconstruction of a car. Computers in Industry, 2013, 64, 1099-1114.	5.7	10
40	Consistent surface model for SPH-based fluid transport. , 2013, , .		10
41	Simulation of Time-of-Flight Sensors for Evaluation of Chip Layout Variants. IEEE Sensors Journal, 2015, 15, 4019-4026.	2.4	10
42	Raycasting of Light Field Galleries from Volumetric Data. Computer Graphics Forum, 2008, 27, 839-846.	1.8	9
43	Interactive Simulation and Visualization of Lamb Wave Propagation in Isotropic and Anisotropic Structures. Journal of Physics: Conference Series, 2011, 305, 012095.	0.3	9
44	A Comprehensive Multi-Illuminant Dataset for Benchmarking of the Intrinsic Image Algorithms. , 2015, , .		9
45	Interpolating scattered data with C2 surfaces. CAD Computer Aided Design, 1995, 27, 277-282.	1.4	8
46	Scattered Data Interpolation Using Data Dependant Optimization Techniques. Graphical Models, 2002, 64, 1-18.	1.1	8
47	GPU-Based Spherical Light Field Rendering with Per-Fragment Depth Correction. Computer Graphics Forum, 2008, 27, 2081-2095.	1.8	8
48	GPU-based framework for distributed interactive 3D visualization of multimodal remote sensing data. , 2009, , .		8
49	GPU-Based Multilevel Clustering. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 132-145.	2.9	8
50	Stand-off real-time synthetic imaging at mm-wave frequencies. , 2012, , .		8
51	Semi-analytic boundary handling below particle resolution for smoothed particle hydrodynamics. ACM Transactions on Graphics, 2020, 39, 1-17.	4.9	8
52	Time-Adaptive Lines for the Interactive Visualization of Unsteady Flow Data Sets. Computer Graphics Forum, 2009, 28, 2165-2175.	1.8	7
53	Simulation and Data-Processing Framework for Hybrid Synthetic Aperture THz Systems Including THz-Scattering. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 625-634.	2.0	6
54	Grid-free out-of-core voxelization to sparse voxel octrees on GPU. , 2015, , .		6

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55	Evaporation and condensation of SPH-based fluids. , 2017, , .		6
56	Robust Range Camera Pose Estimation for Mobile Online Scene Reconstruction. IEEE Sensors Journal, 2018, 18, 2903-2915.	2.4	6
57	A Generative Model for Generic Light Field Reconstruction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 1712-1724.	9.7	6
58	Fair Surface Reconstruction Using Quadratic Functionals. Computer Graphics Forum, 1995, 14, 469-479.	1.8	5
59	Particle Level Set Advection for the Interactive Visualization of Unsteady 3D Flow. Computer Graphics Forum, 2008, 27, 719-726.	1.8	5
60	Special issue on Time-of-Flight camera based computer vision. Computer Vision and Image Understanding, 2010, 114, 1317.	3.0	5
61	Generic visual analysis for multi- and hyperspectral image data. Data Mining and Knowledge Discovery, 2013, 27, 117-145.	2.4	5
62	Real-time motion artifacts compensation of ToF sensors data on GPU. Proceedings of SPIE, 2013, , .	0.8	5
63	Piecewise Rigid Scene Flow with Implicit Motion Segmentation. , 2019, , .		5
64	Training Auto-Encoder-Based Optimizers for Terahertz Image Reconstruction. Lecture Notes in Computer Science, 2019, , 93-106.	1.0	5
65	Ground Truth for Evaluating Time of Flight Imaging. Lecture Notes in Computer Science, 2013, , 52-74.	1.0	5
66	Multi-view Multi-illuminant Intrinsic Dataset. , 2016, , .		5
67	GPu-based framework for interactive visualization of SAR data. , 2007, , .		4
68	Variational Multilevel Mesh Clustering. , 2008, , .		4
69	Spherical light field rendering in application for analysis by synthesis. International Journal of Intelligent Systems Technologies and Applications, 2008, 5, 304.	0.2	4
70	Automatic Point Target Detection for Interactive Visual Analysis of SAR Images. , 2008, , .		4
71	Fast GPU-based spot extraction for energy-dispersive X-ray Laue diffraction. Journal of Instrumentation, 2014, 9, T11003-T11003.	0.5	4
72	Dynamic terrain rendering. 3D Research, 2010, 1, 1.	1.8	3

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73	Preoperative volume determination for pituitary adenoma. Proceedings of SPIE, 2011, , .	0.8	3
74	Online improvement of time-of-flight camera accuracy by automatic integration time adaption. , 2015, , .		3
75	Fast motion estimation for field sequential imaging: Survey and benchmark. Image and Vision Computing, 2019, 89, 170-182.	2.7	3
76	Supervised classification of monomodal and multimodal hyperspectral data in vibrational microspectroscopy: A comprehensive comparison. Chemometrics and Intelligent Laboratory Systems, 2019, 184, 112-122.	1.8	3
77	Multiâ€Level Memory Structures for Simulating and Rendering Smoothed Particle Hydrodynamics. Computer Graphics Forum, 2020, 39, 527-541.	1.8	3
78	A Lightweight Approach to 3D Measurement of Chronic Wounds. Journal of WSCG, 2019, 27, .	0.6	3
79	Real time fusion of range and light field images. , 2005, , .		2
80	Immersive Rear Projection on Curved Screens. , 2009, , .		2
81	Efficient, robust, and scale-invariant decomposition of Raman spectra. , 2013, , .		2
82	Vector Field Visualization of Advectiveâ€Diffusive Flows. Computer Graphics Forum, 2015, 34, 481-490.	1.8	2
83	Defocus deblurring and superresolution for time-of-flight depth cameras. , 2015, , .		2
84	Flow Driven GPGPU Programming combining Textual and Graphical Programming. , 2016, , .		2
85	Fast GPU-based absolute intensity determination for energy-dispersive X-ray Laue diffraction. Journal of Instrumentation, 2016, 11, T01001-T01001.	0.5	2
86	Multiresolution Analysis Pansharpening for the Fusion of Raman and Conventional Brightfield Microscopy Images. , 2019, , .		2
87	Designing Technology, Developing Theory: Toward a Symmetrical Approach. Science Technology and Human Values, 2021, 46, 528-554.	1.7	2
88	Supervised Deep Kriging for Single-Image Super-Resolution. Lecture Notes in Computer Science, 2019, , 638-649.	1.0	2
89	Deep Optimization Prior for THz Model Parameter Estimation. , 2022, , .		2
90	A platform for visualizing curves and surfaces. CAD Computer Aided Design, 1995, 27, 559-566.	1.4	1

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91	Evolution analysis with animated and 3D-visualizations. , 2009, , .		1
92	Visual assistance tools for interactive visualization of remote sensing data. , 2010, , .		1
93	Material classification through distance aware multispectral data fusion. Measurement Science and Technology, 2013, 24, 045001.	1.4	1
94	Application of Pansharpening Algorithms for the Fusion of Raman and Conventional Brightfield Microscopy Images. , 2018, , .		1
95	Segmentation and Shape Extraction from Convolutional Neural Networks. , 2018, , .		1
96	Progressive Refinement Imaging. Computer Graphics Forum, 2020, 39, 360-374.	1.8	1
97	Fair Surface Reconstruction Using Quadratic Functionals. Computer Graphics Forum, 1995, 14, 469-479.	1.8	1
98	Radviz-based visual analysis of multispectral images. , 2013, , .		0
99	Efficient and accurate linear spectral unmixing. , 2013, , .		0
100	Component based data and image processing systems — A conceptual and practical approach. , 2015, , .		0
101	Visual Analysis of Confocal Raman Spectroscopy Data using Cascaded Transfer Function Design. Computer Graphics Forum, 2017, 36, 239-249.	1.8	0
102	Global Gradient Estimation of Hyperspectral Images for Registration Refinement in Multimodal Microspectroscopy. , 2021, , .		0
103	Classifying Volume Datasets Based on Intensities and Geometric Features. Studies in Computational Intelligence, 2009, , 63-86.	0.7	0
104	Virtuelle Rekonstruktion und interaktive Exploration der Schlossanlage Dillenburg. , 2009, , 119-138.		0
105	An Object-Oriented Approach to Curves and Surfaces. , 1996, , 33-44.		0
106	Abstracting Data and Image Processing Systems using a Component-based Domain Specific Language. , 2016, , .		0
107	Human Action Recognition based on 3D Convolution Neural Networks from RGBD Videos. , 0, , .		0
108	Advanced signal processing techniques for THz imaging and sensing enhancement in material quality control applications. , 2019, , .		0

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109	A Generic Framework for Depth Reconstruction Enhancement. Journal of Imaging, 2022, 8, 138.	1.7	0